N15/3/BUSMT/HP2/ENG/TZ0/XX

Diploma Programme
Programme du diplôme
Programa del Diploma

Business and management
Higher level
Paper 2

Friday 20 November 2015 (morning)

2 hours 15 minutes

Instructions to candidates

- Do not open this examination paper until instructed to do so.
- Section A: answer one question.
- Section B: answer two questions.
- A calculator is required for this examination paper.
- Clean copies of the **business and management formulae sheet and discount tables** are required for this examination paper.
- The maximum mark for this examination paper is **[75 marks]**.

10 pages

8815 – 5012

Section A

Answer **one** question from this section.

1. EcoCycle

Dan Perdue is a sole trader who sells bicycles. His unique selling point (USP) is bicycles that are made from recycled materials using environmentally friendly processes. Dan's customers are willing to pay high prices for these types of bicycles, and they have a price inelastic demand. Currently Dan purchases the bicycles from *GreenRide*, a local manufacturer. *GreenRide* bicycles are well made, rarely have defects, and are well known to environmentally conscious cyclists. The income elasticity of demand for Dan's bicycles is greater than one.

Table 1: financial data for Dan's bicycles, for 2015:

Number of bicycles sold	130
Sales price per bicycle	$1000
Variable costs per bicycle	$650
Fixed costs per year	$42 000

The economy is forecasted to grow in the upcoming years. To take advantage of the growth potential, Dan is considering forming a partnership with David Brown, a skilled mechanic who knows how to manufacture bicycles. Both Dan and David would be equal partners and split the profits. The partnership will begin on 1 January 2016 and would trade under a newly created brand, *EcoCycle*. Recycled materials and environmentally friendly processes would be used to manufacture all the *EcoCycle* bicycles.

Table 2: forecasted financial data, for *EcoCycle* bicycles, for 2016:

Number of *EcoCycle* bicycles sold	200
Variable costs per *EcoCycle* bicycle	$300
Fixed costs per year	$65 000

Dan, however, conducted primary market research which indicated that respondents were only willing to pay a much lower price for the untested, unknown brand *EcoCycle*.

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(Question 1 continued)

(a) Describe **one** advantage **and one** disadvantage, for Dan, of using primary market research. [4]

(b) Using **Table 1**, calculate for Dan, for **2015**:

(i) the break-even number of bicycles (*show all your working*); [2]

(ii) the total profit (*show all your working*). [2]

(c) Explain **one** benefit for Dan of the income elasticity of demand for his bicycles being greater than one. [2]

(d) Using **Table 2**, for the new *EcoCycle* bicycles, for **2016**:

(i) calculate the price that Dan must charge to earn a target profit of $20 000 (with sales of 200 *EcoCycle* bicycles) (*show all your working*); [2]

(ii) using your answer to part (i), and assuming that Dan reduces this price by 5 %, calculate the number of bicycles *EcoCycle* must sell to still have a target profit of $20 000. [3]

(e) Explain **two** reasons why branding of the new *EcoCycle* bicycles will be important. [4]

(f) Examine Dan's decision to create a partnership with David to manufacture and sell *EcoCycle* bicycles. [6]

2. Bip Bip (BB)

Nicolás and Loura want to start up a vehicle rental business in Punta del Este, a seaside resort in the Southern Hemisphere. The business will operate as a partnership and be called *Bip Bip* (*BB*). Tourist numbers are very high during the summer (December to February months in the Southern Hemisphere); the beach and water sports attract many tourists. *BB* will rent out convertible cars, electric cars and minivans. *BB* will purchase these vehicles through a leasing scheme.

"Because most rental income will occur in a few months of the year, we must forecast our cash position during the slow months and we must follow a budget," says Loura. She has forecasted the following figures for the first six months of operation, beginning in December 2015. All revenues received and costs paid will be in cash. All cash sales are paid at the time of the vehicle rental.

	$
Monthly revenue from rentals: December 2015 to February 2016	11 000
Monthly revenue from rentals: March to May 2016	1000
Monthly overheads starting in December 2015	2000
Leasing fee for all vehicles, payable by *BB* every other month starting in December 2015	5000
Monthly variable costs: December 2015 to February 2016	1500
Monthly variable costs: March to May 2016	300
Opening balance in December 2015	1000

Due to the increasing importance of e-commerce, *BB* would like to offer an online booking service in addition to their website. Nicolás believes that an online booking service will allow *BB* to reach a wider national and international market, and will also reduce marketing costs. However, Loura argued that e-commerce also has some limitations.

After further discussion, Nicolás and Loura decided not to set up an online booking service. However, after May 2016, they will examine the budget and variances with care to determine if *BB* should offer an online booking service the following year.

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(Question 2 continued)

(a) Describe **one** reason why customers might be reluctant to use an online booking service (e-commerce). [2]

(b) Identify **two** features of a partnership. [2]

(c) (i) Prepare a monthly cash-flow forecast, for *BB*, for the first six months of operation. [6]

(ii) Explain *BB*'s forecasted cash-flow position. [3]

(iii) Calculate the forecasted net profit, **without any depreciation**, for the first six months of operation (*show all your working*). [2]

(d) In June 2016 *BB* discovered that some of their forecasts had been inaccurate.

For December 2015, and January and February 2016, variable costs had been 10 % lower than forecasted.

(i) Calculate the impact of lower variable costs on *BB*'s closing cash balance, at the end of February 2016 (*show all your working*). [2]

(ii) For March, April and May 2016, revenue was 10 % higher.

Calculate the impact of lower variable costs **and** higher revenue on *BB*'s closing cash balance, at the end of May 2016 (*show all your working*). [2]

(e) Analyse the role of budgets and variances, in strategic planning, for businesses such as *BB*. [6]

Section B

Answer **two** questions from this section.

3. Transfer

Transfer is a publicly traded shipping business. Its success has been built on its ambitious mission statement:

"Our shipping business will always be about providing a first class service to our customers and making it last. Whatever it takes."

Managers at individual regional profit centres were empowered to make their own decisions in response to local market conditions. *Transfer*'s financial reward package allowed employees to share in their regional profit centre's performance through an employee share-ownership scheme. *Transfer* had consistently won awards for its excellent customer service. Management and staff turnover was very low.

However, after years of profits that were low by industry standards, *Transfer* suffered a significant financial loss. The current chief executive officer (CEO) claimed it was due to increased global competition and rising direct costs. *Transfer*'s non-employee shareholders, who owned 60 % of *Transfer*, demanded that immediate action be taken. At the most recent annual general meeting (AGM) the CEO was forced to resign. A new CEO, Heather Davies, was appointed.

Heather had a reputation as an autocratic leader. She had a successful record of returning loss making companies to high profits, but only after making significant changes. At her first press conference, Heather announced her plan to:

- reduce two-way communication and create a much higher degree of centralization within *Transfer*
- remove all profit centres.

Immediately, Heather dismissed many managers who were, in her opinion, unproductive.

She defended her actions by arguing that *Transfer* had become inefficient, with poor decision making at regional levels. Heather argued that regional profit centre managers were setting their own objectives which did not follow the mission statement.

At the same time, an unknown manager gave a national newspaper interview which was highly critical of Heather's leadership style, with examples of workplace unrest. When Heather found out, she threatened to dismiss any manager who questioned her authority or the new plan. Six months later, *Transfer*'s share price had grown by 15 % and profits had begun to significantly increase.

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(Question 3 continued)

(a) Identify **two** characteristics of a company with a high degree of centralization. [2]

(b) Describe **one** benefit of an employee share-ownership scheme. [2]

(c) Explain **one** benefit **and one** cost of *Transfer*'s mission statement. [6]

(d) Examine the decision to remove all profit centres. [6]

(e) Discuss the effectiveness of Heather's leadership style at *Transfer*. [9]

4. Mergers in the airline industry

Recently, *British Airways* merged with *Iberia*, and *Air France* merged with *KLM*. Both mergers resulted in some significant benefits.

Ryanair plans a £560 million takeover of the Irish airline, *Aer Lingus*, which has failed to deliver shareholder dividends. One shareholder, the Irish government, owns 25 % of the shares of *Aer Lingus*.

Ryanair's chief executive officer (CEO) said that the proposed takeover could:
- create revenue and a positive return for the Irish government by selling its shares
- create a strong Irish airline capable of competing with major European airlines.

This form of external growth is also occurring in the United States (US). *American Airlines* and *US Airways* will merge, forming the nation's biggest airline, to be called *American*.

Airline analysts argue that mergers are necessary to reduce financial uncertainty and restore stability to a business that lost about $60 billion in 10 years. Large airlines with big networks can invest in new airplanes, new routes and better facilities, and provide passengers with more travel options. Mergers are likely to increase operational and financial efficiencies and create economies of scale. Airline analysts, favouring airline mergers, emphasize that each merger must be approved by appropriate national and international regulatory agencies to ensure that the competitive nature of the industry is maintained.

Other analysts, however, argue that:
- large airlines make it difficult for smaller rivals to compete, and in the long run reduce competition. This situation may lead to higher fares and a poorer service.
- being larger may not make airlines globally competitive. Some national governments restrict operation of foreign airlines within their countries, which allows a local airline monopoly* to exist.
- strategic decisions are difficult to implement as companies grow in size.
- larger is not always better.

[Source: adapted from http://dealbook.nytimes.com;
http://www.guardian.co.uk;
http://www.nytimes.com]

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* monopoly: an industry where there may be only one seller/producer of a particular good or service

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(Question 4 continued)

(a) Describe **one** difference between a merger and a takeover. [2]

(b) Define the term *economies of scale*. [2]

(c) With reference to the airline industry, explain **two** differences between external growth and internal growth. [6]

(d) Examine the Irish government's decision to own 25 % of the shares of *Aer Lingus*. [6]

(e) With reference to **one** internal stakeholder **and one** external stakeholder, discuss the statement that "larger is not always better" from the perspective of the airline industry. [9]

5. Sigma Productions (SP)

Sigma Productions (*SP*), a market leader with a strong family brand name, develops and sells online computer games. The social, technological and competitive environment is changing rapidly. Product life cycles for online games are becoming much shorter. *SP* must keep innovating, but this process is costly and time consuming. It can take at least three years to develop and introduce a new computer game to the market.

One online game, *Sigma Starfighter 1*, was a major financial success. Now *SP* is developing a new version, *Sigma Starfighter 2*, which will be released in 2016. Its release is causing great excitement. *Sigma Starfighter 2* will be priced using penetration pricing. *SP*'s main source of finance has been retained profits.

SP is developing an application (app) for mobile phones. The app will allow users to access information about the company and try new online games through limited free trials. The app will also add value to the family brand. The app is expected to be launched before *Sigma Starfighter 2* is released and will be given away for free.

However, *SP*'s current cash flow position is weak. With high research and development (R&D) costs, *SP* needs additional capital to complete the development of the app and *Sigma Starfighter 2*. Four different banks have refused to provide finance. *SP* must urgently attract new investors.

(a) Describe **one** reason for the importance of innovation for *SP*. [2]

(b) Identify the first **two** stages of the product life cycle. [2]

(c) Explain **one** benefit and **one** cost of family branding for *SP*. [6]

(d) Analyse the appropriateness of penetration pricing for *SP* when they launch *Sigma Starfighter 2*. [6]

(e) Discuss **two** problems of financing research and development (R&D) for a business such as *SP*. [9]